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## EAC Toolkit - Instructor Module for Theory Building Activities: Mountain Terrorist Exercise

### REFERENCE OR LINK TO STUDENT MODULE

#### Introduction

The Mountain Terrorist scenario that constitutes the core of the corresponding student module comes from the philosopher, Bernard Williams. It is common in introductory ethics textbooks (such as Geoffrey Thomas' *An Introduction to Ethics*). Williams' own account can be found in several anthologies including **Ethical Theory: Classics and Contemporary Readings, 5th edition** (2007) edited by Louis Pojman. (See note below,) The corresponding student module uses the core scenario to introduce students to ethical argument, to get them to recognize that they are already employing ethical arguments, and to get them to practice the virtue of reasonableness.

#### Core Instructor Module Links include...

- The Instructor Module Template which provides the general framework for instructor modules in the EAC Toolkit.
- The student module, "Theory Building Activities: Mountain Terrorist Exercise," which is published in the Connexions® Content Commons.
  - The student module is also accessible in the course, **Corporate Governance** (col10396). A link included in this module provides access to this course.
  - The student module can be accessed through the course, **Professional Ethics in Engineering** (col10399) which is published in the published in Connexions® Content Commons and linked to in this instructor module.
  - See notes below for textbooks that present the core dilemma scenario.

### INSTRUCTOR RESOURCES(Sharing Best Practices in EAC!)

**This section contains information related to the above referenced Student Module. The intent and expectation is that the information**

contained in this section will evolve over time based on the experiences and collaborations of the authors and users of the Student Module and this Instructor Module. For example, the authors, collaborators or users can provide the following kind of information (mainly directed at or intended for instructors).

## **Module-Background Information**

**Where did this module come from? (e.g. A workshop, news story, based on a movie, etc.) What condition is it in? (e.g. first draft, needs editing, publishable, etc.) How has it been used in the past? (e.g. in classroom, workshop activity, ethics debate, etc.) Other relevant or interesting details**

The first time this module's author became aware of its use in the classroom was in a workshop on Agriculture Ethics led by Paul Thompson, then of Texas A and M University, in 1992. Thompson's particular instantiation of this exercise was broadcast over the AG-SAT network in the spring of 1992 during a course on Agricultural Ethics. The module is based on a scenario, "Jim and the Jungle," first put forth by Bernard Williams (see note below) in a work devoted to the criticism of utilitarianism. While the scenario does present challenges to utilitarianism (and deontology), it is used in this context to help students see how ethical theories are encapsulated in moral reasoning and moral arguments.

## **Learning Objectives**

- **Ethical Reasoning:** Practicing and improving ethical reasoning.
- **Ethical Evaluation:** Evaluating decision alternatives in terms of their ethics.
- **Ethical Awareness:** Becoming aware of how ethical theory and ethical issues are embedded in everyday discourse.
- **Reasonableness:** Practicing the virtue of reasonableness in the context of reasonable disagreement

- Learning **how to recognize** the ethical theory embedded in everyday reasoning.

**The following table documents the objectives for the student module.**

EAC Matrix

<https://cnx.org/content/m14351/>

This table documents an EAC integration activity in terms of moral objectives, accreditation criterion, and curriculum location.

## **Instructional / Pedagogical Strategies**

Which pedagogical or instructional strategies are used or suggested for this module. (For example: Discussion/Debate, Decision-Making Exercise, Presentation, Dramatization or Role Playing, Group Task, Formal or Informal Writing, Readings, among others)

**This module employs the following pedagogical strategies:**

- **Informal Writing:** Students prepare for the activity by reading the scenario and writing out their response.
- **General Class Discussion:** Students discuss the scenario as a class. No attempt is made to reach agreement or closure.
- **Cooperative Learning:** Students are divided into groups of three to five. Each student reads his or her written response to the other group members. Then the group is charged with reaching an agreement within a time frame or outlining the terms of their disagreement
- **Eliciting Knowledge:** The instructor provides a formal debriefing outlining the ways in which students have used ethical reasoning, the structures in terms of which they raised and resolved disagreements, and how they made use of different ethical theories in formulating

their justifications and arguments. If time permits, the instructor can add a more formal introduction to different kinds of ethical theory that draws the theory from the arguments the students have made during their discussions.

- This module is used to introduce two new modules, the Ethics of Team Work and Moral Exemplars. (The latter explores issues in ethical leadership.)

For those new to teaching cases and teaching by discussion, the Computing Cases website has information and links that will be of great help. Address: [http://computingcases.org/general\\_tools/teaching\\_with\\_cases/teaching\\_w\\_cases\\_intro.html](http://computingcases.org/general_tools/teaching_with_cases/teaching_w_cases_intro.html)

## **Assessment / Assurance of Learning**

What assessment or assurance of learning methods are used or suggested for this module? (For example: 1-minute paper, Muddiest Point, Quiz/Test Items, Oral Presentation, Student Feed-back, among others). What did or didn't work?

### **Modes of Assessment**

1. **Informal Writing:** A baseline for assessment can be established by examining the students' initial written responses to the scenario. For example, student responses can be assessed in terms of where the responses provided by the students fit on Kohlberg's scale of moral development. In this particular version, students are assessed in terms of the moral schemas that are triggered by the dilemma situation. (See Rest et al below.)
2. **Muddiest Point Exercise:** The student module can also be assessed by using a simple Muddiest Point exercise that asks the students to indicate the strongest and weakest (=muddiest) parts. (See figure just below for handout.)
3. **EAC Module Assessment Form:** A form modified from one developed and used by Michael Davis of IIT helps provide a more detailed assessment of this and other modules. See figure below.

## Muddiest Point Handout

<https://cnx.org/content/m14351/>

This file provides a handout in Word form for carrying out a Muddiest Point assessment activity.

This module's author learned about this activity from an assessment webpage at Southern Illinois University at Edwardsville. For more information consult the Muddiest Point link in this module.

## Module Assessment Form

<https://cnx.org/content/m14351/>

This file contains an assessment form developed by Michael Davis of the Illinois Institute of Technology to assess EAC integration projects. It has been slightly modified by the authors.

## **Preliminary Assessment Results from Muddy Point Exercise**

1. Some students felt constrained by the dilemma framing of the scenario. They didn't like being forced to choose between shooting a villager or walking away. They wanted more freedom to explore other options.

2. Other students wanted the scenario to provide more details to aid them in making their decision. For example, did the villagers collaborate with the enemy, which ones collaborated, what was the cause of the terrorists, etc. They felt this would make it easier to make an defend an ethical choice.
3. Some students (not all) had trouble seeing how their modes of reasoning made use of established ethical modes of argument.
4. Finally, many wanted to see more closure in the activity. For example, what did the instructor think, what was the correct answer to the dilemma, how did this relate to their project study in business ethics.
5. As a result of this assessment exercise, a new conclusion was added to the student module. It emphasized how moral theory was embedded in the students' comments and how the students practiced the virtue of reasonableness in listening to different positions and searching for areas of agreement.

## **Pedagogical Commentary**

Any comments or questions regarding this module? (For example: suggestions to authors, suggestions to instructors (how-to), queries or comments directed o EAC community, pitfalls or frustrations, novel ideas/approaches/uses, etc.)

This exercise always evokes a strong response from students. In final course evaluations, students often refer to this exercise as the most memorable experience in the course. But many are frustrated by the lack of closure and are uncomfortable with the lack of closure. The following list provides a partial set of guidelines to keep in mind when teaching this module:

- The most important thing an instructor can do in this module is listen. Students often make use of moral arguments and ethical theory. Listening carefully to their arguments and highlighting how they use argument and theory provides a means of introducing ethical theory without falling prey to the theory-practice gap.

- Closure can be reached by having students reflect on how they dealt with disagreements with their peers. In small groups, for example, students who have trouble agreeing can be asked to reflect on this experience. They can be encouraged by showing them how their discussion, while not issuing in agreement, often sharpened and clarified the nature and terms of disagreement.
- Students often come into an ethics class with the idea that all ethical problems are dilemmas, that is, forced choices between two, equally bad alternatives. The frustration they experience in resolving the Mountain Terrorist dilemma can be used to motivate them to reframe problems that initially take the dilemma form. In other words, the exercise can be used as an occasion to introduce and practice moral imagination.

## Appendix (Annotated)

### Bibliography

1. Bernard Williams, "Against Utilitarianism," in **Ethical Theory: Classics and Contemporary Readings, 5th edition** (2007) edited by Louis Pojman, Belmont: Wadsworth: 219-228.
2. Geoffrey Thomas (1994) **An Introduction to Ethics**, U.K.: Oxford.
3. James R. Rest, D. Narvaez, M.J. Bebeau, and S.J. Thoma. (1999) **Postconventional Moral Thinking: A Neo-Kohlbergian Approach**, Lawrence Erlbaum Press, Hillside, N.J.
4. Mark Johnson (1993) **Moral Imagination: Implications of Cognitive Science for Ethics**, University of Chicago Press, Chicago.
5. Anthony Weston (2006) **A Practical Companion to Ethics**, U.K.: Oxford University Press.

Additional information or annotations for instructors regarding the Student Module Appendix

## EAC Toolkit - Instructor Module: Pirate Code of Ethics

### **Instructor Module Introduction**

This Instructor Module corresponds to the Student Module, "Pirate Code for Engineering Ethics," identification number m13489. It is published in the Connexions Content Commons. In this module, we will explain how the Pirate Code module has been taught, how students have reacted, how the module has been assessed, and the different variations on a theme that are being developed.

### **REFERENCE OR LINK TO STUDENT MODULE**

- Link or Reference to the corresponding student module in Connexions® (cnx.org)
- Reference or Link to the corresponding student module. For example:
  - Link (URL) to a module or resource available online
  - Reference to a textbook case or exercise
  - Reference to a magazine or journal article
  - Reference to a news story
  - Reference to a movie or show
  - Etc.

### **Links to Student Module**

Links to the Pirate Code for Engineering Ethics module can be found the upper left hand corner of this module in standard viewing format. The link provided there is <http://cnx.org/content/m13849/latest/> Other links have been provided in this module to the Instructor Module Template, the course, Corporate Governance, and the course, Professional Ethics in Engineering. Viewing the module in these courses give some insight into the context in which the module has been customarily taught.

### **Link to English Version of Pirate Credo**

While the student module has a Spanish translation of the Pirate Credo (prepared by Dr. Dana Collins) it also links to one of the many online versions of this credo.

### **Link to English Professional Code of Ethics**

The Student Module also uses the Spanish CIAPR code of ethics to help orient students to professional codes of ethics. For those who do not read Spanish, a link to the NSPE code has been provided. The CIAPR code closely parallels the NSPE code in form and content.

## **INSTRUCTOR RESOURCES(Sharing Best Practices in EAC!)**

**This section contains information related to the above referenced Student Module. The intent and expectation is that the information contained in this section will evolve over time based on the experiences and collaborations of the authors and users of the Student Module and this Instructor Module. For example, the authors, collaborators or users can provide the following kind of information (mainly directed at or intended for instructors).**

### **Module-Background Information**

Where did this module come from? (e.g. A workshop, news story, based on a movie, etc.) What condition is it in? (e.g. first draft, needs editing, publishable, etc.) How has it been used in the past? (e.g. in classroom, workshop activity, ethics debate, etc.) Other relevant or interesting details

#### **Module Background**

- This module was suggested first by a trip to Savannah, Georgia (with its rich pirate history) and the movie, **Pirates of the Caribbean**. "Suggested" is the proper word here because there is no sense in which professional and corporate codes of ethics serve merely as guidelines for members interested in loopholes for unprofessional behavior.
- This module has also been developed in response to a common objection to teaching codes of ethics in Practical and Professional Ethics classes. If students tend to treat codes as infallible authorities, then having them begin with an obviously flawed code can do much to overcome this tendency and cultivate in them a questioning, critical attitude toward codes.

- For this reason, John Ladd's influential objections to codes of ethics form an important part of this module. Can codes be written, interpreted, and used to avoid his criticisms and pitfalls?

## Uses of the Pirate Code Module

1. **Engineering Ethics:** This activity has been used for four years in courses at the University of Puerto Rico at Mayaguez in engineering ethics. Students study the pirate code, develop their own codes, and compare both to professional codes in engineering.
2. **Business Administration Faculty Workshops:** This activity has also been used in faculty workshops to help participants develop their own codes of ethics for accreditation purposes. (For example, AACSB accreditation.) The Pirate Code activity helps to moderate through humor what can be a very difficult and divisive process.
3. **Workshops in Ethics for High School Teachers:** This activity has also been used in workshops with teachers in public schools to suggest an interesting classroom activity. In particular, it played a part in a workshop sponsored by the Puerto Rican Humanities Foundation held in the summer of 2005.
4. **Humanities Classes:** In a creative variation on a theme, Professor Dana Collins of UPRM uses the pirate code to introduce Humanities students to an exercise where they write codes from the point of view of classical authors in the Humanities such as Machiavelli. This variation promotes the study of the Humanities tradition as well as provides students with an opportunity to practice critical thinking.
5. **Business Ethics Classes:** This activity has been incorporated into a new module, "Developing a Statement of Values," (m14319) for classes in Business Ethics. The new point in this variation is to use the code to help students distinguish between compliance and values-based approaches to the Federal Sentencing Guidelines.

## Learning Objectives

What are the intended learning objectives or goals for this module? What other goals or learning objectives are possible?

## Learning Objectives

- **Corporate Governance:** This module addresses the AACSB criteria of corporate governance by acquainting students with different elements of codes of ethics which form essential components of corporate ethics compliance programs.
- **Ethical Awareness:** Studying the Pirate Code and Codes of Ethics help make students aware of ethical issues in practical and professional practice.
- **Ethical Integration:** This module gives students practice in integrating ethical value into practice by seeing how codes address these issues and by addressing issues themselves as they develop their own codes.
- **Ethical Prevention:** This module shows students how codes are constructed to anticipate and prevent ethical issues and problems from arising.
- **Ethical Leadership:** This module helps student practice leadership by having them take the position of ethics compliance officers in charge of developing, disseminating, and implementing a code as part of an overall corporate ethics program.
- **Social Responsibility:** This module can be taught to give students an idea of gaps in the manner in which codes of ethics address social responsibility issues and how these gaps can be filled.

The figure below provides an EAC Matrix used at the University of Puerto Rico at Mayaguez in the College of Business Administration. It also separates the objectives mentioned just above into primary and secondary areas of focus. Later, in an assessment process to be carried out spring 2007, this module will be assessed and the actual outcomes will be added in a revision of this instructor module.

Pirate Code Student Module Matrix

<https://cnx.org/content/m14357/>

This matrix identifies the learning objectives of the corresponding student module by cross

referencing the moral development objectives, with AACSB accreditation criteria and the curricular space the module fills.

### **Instructional / Pedagogical Strategies**

Which pedagogical or instructional strategies are used or suggested for this module. (For example: Discussion/Debate, Decision-Making Exercise, Presentation, Dramatization or Role Playing, Group Task, Formal or Informal Writing, Readings, among others)

**This module employs the following pedagogical strategies:**

1. **Informal Writing:** Students can prepare for this activity by reading the Pirate Credo and writing out a response to exercise 1.
2. **General Class Discussion:** The class can, as a whole, react to and discuss the pirate credo. For more information on how to lead class discussions, consult Computing Cases. (See link above.)
3. **Cooperative Learning:** Students form small groups to write codes, statements of values, and to discuss existing practical and professional codes. Groups that write codes debrief on them to the class and react, as groups, to the debriefing of other groups.
4. **Eliciting Knowledge:** Instructors can use student reactions to the pirate credo to show students that codes serve different functions, embody values, and send different messages to different constituents. They can also underline general points about the structures of codes as these are characterized in the student codes. In this way, knowledge is elicited from the activities of the students.
5. **Pre-Module Skills:** Students need some understanding of ethical theory in order to be able to criticize the Pirate Credo and existing practical and professional codes.
6. **Module Debriefing:** An effective way for an instructor to debrief students on this module is to have them look at existing professional

codes such as the code of the Puerto Rico State Society of Professional Engineers and Land Surveyors. Material is provided in the student module to facilitate this reflection. By coming to a code of ethics after having discussed the pirate credo and have written their own, student are less likely to take everything on faith.

7. **Practice Critical Thinking:** Summaries of criticisms of codes are provided in the module to help encourage students to think critically about codes, most especially their own codes. Having them write codes also clues them into possibilities for revising existing codes.

### **Assessment / Assurance of Learning**

What assessment or assurance of learning methods are used or suggested for this module? (For example: 1-minute paper, Muddiest Point, Quiz/Test Items, Oral Presentation, Student Feed-back, among others). What did or didn't work?

#### **Module Assessment Strategies**

The figures below provide handouts for assessing this module. Furthermore, this module can be assessed by the quality of the codes prepared by the groups and by the informal writing that introduces this module.

Muddiest Point Assessment Form

<https://cnx.org/content/m14357/>

The attached word document provides a handout to assess this module in terms of its weakest and strongest points.

Module Assessment Form

<https://cnx.org/content/m14357/>

This figure contains an

assessment handout, a  
modification of a form  
developed by Michael  
Davis for IIT EAC  
workshops.

## **Pedagogical Commentary**

Any comments or questions regarding this module? (For example: suggestions to authors, suggestions to instructors (how-to), queries or comments directed to EAC community, pitfalls or frustrations, novel ideas/approaches/uses, etc.)

### **Pedagogical Comments**

- The key to this module is to take the instructor off the stage and put the students in her place by using different strategies of active learning. The primary objection to teaching codes is that they deprive moral agents of moral autonomy. The response is to have students confront codes in the active mode. This module achieves this objective by having students view a bad code and then write their own. Armed with this critical apparatus, then--and only then--do they confront existing practical and professional codes.
- The other item of note with this module is the possibility of variations on a theme. This module has already been put to several uses such as classes in ethics, faculty workshops, and humanities classes. The key to understanding and grouping these variations is recognizing that this activity can be moulded around different learning objectives such as developing skills in conflict resolution (in faculty workshops), understanding key components of codes (in ethics classes), and practicing critical thinking (in high school and Humanities classes).

## **Appendix (Annotated)**

Additional information or annotations for instructors regarding the Student  
Module Appendix

## Instructor Module English--Three Frameworks for Ethical Decision-Making and Good Computing Reports

This instructor module provides pedagogical commentaries on teaching the student module, Three Frameworks for Ethical Decision-Making and Good Computing Reports (m13757). It is bilingual with Spanish commentary provided by Ramon Ramos-Chevres and rough English translations provided by William Frey. It and the corresponding student module have been developed as a part of an NSF-funded project, "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF SES 0551779.

### Instructor Module Template

**Student Module Title:** Three Frameworks for Ethical Decision Making and Good Computing Reports m13757

#### Introduction/ Summary

I. Summarize the student module. Include the content objectives and skill objectives of the student as well as the exercises it features.

**Este módulo le provee al estudiante herramientas que va a utilizar en el proceso de tomar decisiones basadas en el concepto de la ética. Una vez que los estudiantes tuvieron la oportunidad de adquirir el módulo, de estudiarlo y de recibir explicación del profesor acerca de los objetivos, metas e instrucciones, estarán preparados para comenzar un proceso de análisis junto con el profesor. Los estudiantes analizarán distintos casos por medio de esta herramienta cumpliendo con el objetivo principal que es integrar la ética en su proceso de tomar decisiones. Se deberá aplicar en el análisis, los tres marcos de referencia: división del proceso de tomar decisiones, proceso de probar las soluciones y la prueba de viabilidad.**

This module provides the student with tools that can be used to make ethical decisions. Students read the module and then attend a formal presentation given by the instructor that outlines the four stages of decision-making. This helps prepare them for case-based, decision-making exercises carried out with feedback provided by the instructor. When they use the three frameworks discussed in the module to analyze case studies, they

succeed in integrating ethics into the decision-making process. Of the three frameworks discussed in the module, one condenses decision making into four stages (problem specification, solution generation, solution testing, and solution implementation), another offers three tests to validate the ethics of solution alternatives (reversibility, harm/benefits, and publicity), and a third covers solution implementation by examining obstacles that arise during this phase (such as resource, interest, and technical constraints).

II. Preparing the environment/atmosphere. In this section, discuss what can be done to create an environment or atmosphere conducive to bringing about the learning objectives of the student module. This could include background readings, advance home work, pre-module writing, activities to get students accustomed to discussing, and so forth.

**Con el objetivo de crear un ambiente de discusión y análisis de este modulo, se recomiendan estrategias para lograr el interés del estudiante. Como introducción al modulo, se podría asignar una tarea donde el estudiante deba analizar un caso y tomar una decisión utilizando como herramientas “sus experiencias individuales”. De manera que, sea el propio estudiante que utilice juicios valorativos y se acerque al uso del concepto de la ética y toma de decisiones. Una vez captada esa atención del estudiante, se le provee la información necesaria para el análisis basado en el modulo: contenido del modulo, ejemplos y discusiones de casos, recursos externos como libros, periódicos, revistas y material que cumpla con los objetivos del modulo. Se espera que el estudiante asuma una posición de discutir y debatir ideas en un ambiente amigable y de confianza. Se espera que esto facilite el aprendizaje, por lo que el profesor/ a debe:**

Several strategies can be used to create an environment conducive to discussion and analysis. To introduce the module, the teachers can assign students a case and have them informally analyze it using their experience as a frame of reference. Getting students used to making value judgments helps them to practice the different skills involved in ethical thinking and decision-making. Such pre-module homework awakens the students' interest in ethics and can form a basis upon which the teacher can build by providing more information, examples of ethical problems, case

discussions, external resources,(books, newspapers, magazines, movies, novels) and other resources that promote ethical decision-making. Moreover, this module gives students practice adopting and defending a position in a civil and confident manner.

- **Dar la oportunidad a que el estudiante hable libremente haciendo preguntas y conversando con los estudiantes de una forma organizada.**
- **Escuchar con atención a cada integrante del grupo y dar su interpretación.**
- **Estructurar un dialogo con el resto de la clase.**
- **Permitir interpretaciones de otros estudiantes.**
- **Identificar aquellas respuestas que cumplen con los objetivos del modulo y publicarla ante todos.**
- **Estar disponible y preparado/a para aclarar dudas.**

### **Suggestions to Facilitate Learning**

- Give students the opportunity to speak freely, ask questions, and discuss issues with classmates in an orderly manner.
- Listen to other speakers attentively and actively interpret what they hear.
- Hold a structured dialogue with the rest of the class.
- Permit interpolations and comments from other students.
- Identify and underline student responses that advance module objectives by instantiating ethical principles and concepts.
- Be open to answering questions and responding to doubts.

III. Learning Objectives: Choose one or both of the following set of moral learning objectives. (The UPRM objectives map almost completely on the Hastings Center objectives.)

### **UPRM Ethical Objectives**

- **Ethical Awareness:** Students are able to recognize and characterize the ethical issues that arise in ordinary situations. In pre test format, student recognizes one ethical issue embedded in a realistic scenario.

- **Ethical Integration:** Students use ethical considerations as specifications in “designing” a solution to a realistic ethical problem. They design solutions to ethical problems that properly and adequately respond to ethical considerations or ethics tests.
- **Preventive Ethics:** Students uncover a latent or potential ethical problem and design effective counter measures. They use sociothechnical analysis or other “tool” to find value conflicts that arise with the implementation of a new product or service and design countermeasures to defuse the conflict.
- **Value Integration:** Students find opportunities in realistic situations for realizing moral value through the exercise of their technical and occupational skills. In consultation with a local community, they identify a need and develop means to respond to this need; usually done in service learning context.
- **Ethical Evaluation:** Students use ethical considerations (approaches, tests) to evaluate and rank alternative solutions to a realistic decision – eliciting situation. In a Gray Matters activity, students correctly rank the alternatives in response to an ethics dilemma or situation.

## **Hasting Center Skills**

- **Moral Imagination:** Module allows students to practice and develop their moral imaginations. Students successfully employ reversibility test to view action alternative from the standpoint of one of the action’s targets.
- **Moral Sensitivity:**Module raises students’ sensitivity to the moral issues that arise in everyday situations. Students successfully identify moral issues embedded in scenario in pre-test or Gray Matters format.
- **Moral Analysis:** Students practice and develop ability to analyze moral concepts and principles. They successfully employ moral approaches and principles in debate of moral issues. (Ethics Bowl or chair debate)
- **Moral Responsibility:** Module elicits from students a sense of moral responsibility. They employ concepts in moral responsibility to assign praise or blame in a moral case or scenario.
- **Tolerating ambiguity and disagreement:** Module helps students tolerate moral ambiguity and disagreement while striving for moral

clarity and agreement. Students debate a difficult and controversial moral case with clarity and civility.

#### IV. Relationship of student module to ethics requirements of targeted accreditation effort AACSB

- **Ethical Leadership:** Helping students to “see the criticality of ethical leadership to effective and successful management.”
- **Ethical Decision-Making:** Learning experiences should expose students to cases and types of ethical issues that they are likely to face in the business world—both to enhance their abilities to recognize ethical issues and to increase their ethical sensitivity and awareness.”
- **Responsibility of Business in Society:** Students should “understand the symbiotic relationship between business and society, especially in terms of the moral dimensions of the power placed in the hands of owners and managers.”

#### Corporate Governance

- Role and responsibilities of board of directors and audit committee.
- Internal controls and role responsibilities of management.
- Monitoring activities such as internal auditing.
- Element of an effective code of conduct.
- U.S. Federal Sentencing Guidance and Sarbanes-Oxly.
- Components of an effective corporate compliance program
- Role responsibilities of public accountants, counsel, and regulatory bodies (EETF 14)

**Source: Ethics Education in Business Schools: Report of the Ethics Education Task Force to AACSB Internal’s Board of Directors**  
**Relation To Accreditation Effort: ABET**

- **Criterion 3c:** Ethics (and others components) in design.
- **Criterion 3d:** Multidisciplinary Team Skills.
- **Criterion 3f:** Professional Ethical Responsibility.
- **Criterion 3h:** Understanding global and social impacts of engineering.

V. Pedagogical Strategies (This list is, by no means, exhaustive. Space provided for strategies not mentioned previously)

- **Lecture:** Providing summaries and explanation of materials in form of formal or informal class presentation by teacher.
- **Reading / Pre-module Assignments:** Students are assigned readings and other activities to help them prepare for module.
- **Writing (Formal and Informal / Individual and Group) :** Students prepare individually or in groups formal or informal written responses to module content.
- **Discussion (Class and Group / Formal and Informal):** Teachers pose questions to student for discussion. Students give formal or informal presentations.
- **Individual or group activities:** Students are divided in groups to carry out different exercises. Students carry out exercises individually.
- **Debate:** A form of discussion where students take and defend a position.
- **Framework-Driven:** Module allows for practicing frameworks (heuristics like decision-making procedures) or tests (ethical approaches, ethics tests)
- **Identifying and reinforcing “good move” moments:** Teacher underlines / emphasizes student comments that advance the module’s learning objectives.

VI. Assurance of Learning (“Tools” and Descriptions)

- **Muddiest Point:** Students are asked to discuss or write on the parts of the module they found most difficult.
- **Two Minute Paper (Informal class or out of class "writes"):** Students write a short essay responding to and reflecting on the module and learning experience.
- **Discussion Points:** A formal or informal discussion is held with the class (or groups) reflecting on the module learning experience.
- **Observer/Assessor Observations:** An outside observer attends class while the module is presented and provides feedback.
- **Feedback (Evaluation) Forms:** Forms designed to elicit feedback on the module. (For example: forms that have students rate and rank

different modules.)

- **Connexions® EAC Toolkit Instructor Module:** Assessment experiences can be integrated to develop a Toolkit Instructor Module.
- **Formal Evaluation Forms (Student and Peer):** Forms used by department or university to gather formal evaluation data.

## **Módulo Para Instructores --Tres Marcos de Referencia para la Toma de Decisiones Éticas y Buenos Reportes de Cómputos**

This instructor module has been developed to help those interested in teaching the student module, Three Frameworks for Ethical Decision-Making and Good Computing Reports (m13757). It has been developed in conjunction with project, "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF SES 0551779.

### **Plantilla del Módulo para Instructor/a**

Para ser completado por un instructor que enseña el módulo de estudiante o por un observador par externo.

Nota: Esto no es una evaluación. La meta es capturar la experiencia de enseñar el módulo de estudiante y compartirla con aquellos que estén interesados en adaptar este módulo para su propio uso.

Titulo del Módulo de estudiante: Tres Marcos de Referencia para la Toma de Decisiones Éticas y Buenos Reportes de Cómputos

### **I. Introducción/Resumen**

Resuma el módulo de estudiante. Incluya los objetivos que contiene y los objetivos de habilidad del estudiante así como los ejercicios que éste presenta.

Este módulo le provee al estudiante las herramientas que se utilizan en el proceso de tomar decisiones basadas en el concepto de la ética. Una vez que los estudiantes tienen acceso al módulo, tendrán la oportunidad de estudiarlo y de recibir explicación del instructor acerca de los objetivos, metas e instrucciones. Luego, estarán preparados para comenzar un proceso de análisis de manera conjunta con el instructor. Los estudiantes podrán analizar distintos casos por medio de esta herramienta, cumpliendo con el objetivo principal que es integrar la ética en su proceso de tomar decisiones. En su análisis, se deberán aplicar los tres marcos de referencia: (1) división del proceso de tomar decisiones, (2) proceso de probar las soluciones y (3) la prueba de viabilidad.

**II. Preparando el ambiente de aprendizaje.** En esta sección, discuta aquello que pueda realizarse para crear un ambiente o atmósfera que se dirija a cumplir con los objetivos de aprendizaje del módulo de estudiante. Esto puede incluir lecturas de fondo, tareas asignadas, escritos antes de entrar al módulo, actividades que podrían acostumbrar a los estudiantes a discutir ideas, etc.

Con el objetivo de crear un ambiente de discusión y análisis, se recomiendan estrategias para lograr el interés del estudiante. Como introducción al módulo, se podría asignar una tarea donde el estudiante deba analizar un caso y tomar una decisión utilizando como herramientas “sus experiencias individuales”, de manera que, sea el propio estudiante que utilice juicios valorativos y se acerque al uso del concepto de la ética y toma de decisiones. Una vez captada la atención del estudiante, entoces se le provee la información necesaria para el análisis basado en el módulo: contenido del módulo, ejemplos y discusiones de casos, recursos externos como por ejemplo libros, periódicos, revistas y material que cumpla con los objetivos del módulo. Se espera que el estudiante asuma una posición de discutir y debatir ideas en un ambiente amigable y de confianza. Se espera que esta estrategia facilite el aprendizaje, por lo que se recomienda que el instructor deba:

- Brindar la oportunidad a que el estudiante hable libremente, formulando preguntas y conversando con los estudiantes de una forma organizada.
- Escuchar con atención a cada integrante del grupo y dar su interpretación o retroalimentación.
- Estructurar un diálogo con el resto de la clase.
- Permitir interpretaciones de otros estudiantes.
- Identificar aquellas respuestas que cumplen con los objetivos del módulo y publicarla ante la audiencia.
- Estar disponible y preparado/a para aclarar dudas.

**III. Objetivos de Aprendizaje Moral** (Los objetivos de UPRM trazan casi completamente con los “Hasting Center Objectives”)

**Objetivos Éticos UPRM**

- **Conciencia Ética:** Los estudiantes serán capaces de reconocer y caracterizar los problemas o casos éticos que se presentan en situaciones ordinarias. Utilizando una forma de pre prueba, los estudiantes reconocerán una cuestión ética implantada en un escenario realista.
- **Evaluación Ética:** Los estudiantes utilizarán consideraciones éticas (pruebas, acercamientos) para evaluar y clasificar soluciones alternas con decisiones realistas. En la actividad de Gray Matters los estudiantes clasificarán correctamente las alternativas, en respuesta a una situación o dilema ético.
- **Integración Ética:** Los estudiantes utilizarán consideraciones éticas como especificaciones en el "diseño" de una solución de un problema realista. Diseñarán soluciones a problemas éticos que respondan propia y adecuadamente a las consideraciones o pruebas éticas.
- **“Ética” Preventiva:** Los estudiantes descubrirán un problema ético latente o potencial y diseñarán medidas contrarias de una manera eficaz. Utilizarán el análisis socio-técnico u otra “herramienta” para encontrar conflictos de valor que se levantan con la implementación de un nuevo producto o servicio y diseñarán medidas preventivas para desactivar el conflicto.
- **Realización del Valor:** Los estudiantes buscarán oportunidades en situaciones realistas para desarrollar su valor moral por medio de los ejercicios de habilidades técnicas y ocupacionales. En consulta con una comunidad local, ellos identificarán una necesidad y desarrollarán los medios para responder a la misma; esto usualmente en un contexto de aprendizaje de servicio.

### **Habilidades del “Hastings Center”**

- **Imaginación Moral:** El módulo permite a los estudiantes desarrollar y poner en práctica sus imaginaciones morales. Los estudiantes emplearán con éxito la prueba de reversibilidad para ver la alternativa desde el punto de vista de los objetivos de la acción.
- **Sensibilidad Moral:** El módulo exalta la sensibilidad moral de los estudiantes frente a las controversias éticas que se levantan en situaciones diarias. Los estudiantes identificarán exitosamente las

controversias morales en un escenario señalado en una pre- prueba o en el formato “Gray Matters”.

- **Análisis Moral:** Los estudiantes practicarán y desarrollarán su habilidad para analizar conceptos y principios morales. Ellos aplicarán exitosamente acercamientos y principios en uno o varios debates de controversias éticas. (“Ethics Bowl” o debate en salón de clases)
- **Responsabilidad Moral:** La aplicación de los ejercicios del módulo provocará en los estudiantes un sentido de responsabilidad moral. Ellos emplearán conceptos de responsabilidad para levantar juicios valorativos en un caso o escenario moral.
- **Tolerando la ambigüedad y el desacuerdo:** La aplicación del módulo ayudará a los estudiantes a tolerar la ambigüedad y el desacuerdo que se pueda generar mientras se esfuerzan por la claridad y el acuerdo entre sus argumentos. Ellos debatirán un caso controversial de una manera clara y civilizada.

Relación del módulo de estudiante con los requerimientos éticos de los objetivos de acreditación AACSB

- **Liderazgo Ético:** Ayuda a los estudiantes a "ver el aspecto crítico del liderazgo ético para un manejo exitoso y efectivo de la gerencia."
- **Toma de Decisiones Éticas:** El aprendizaje de experiencias debe exponer a los estudiantes a casos y controversias éticas que se encontrarían en el mundo de los negocios para así, mejorar sus habilidades en reconocer esas controversias y para aumentar su sensibilidad y conciencia ética.
- **Responsabilidad de la Empresa en la Sociedad:** Los estudiantes deben "entender la relación simbiótica que existe entre la empresa y la sociedad en que ésta funciona, especialmente en término de las dimensiones morales del poder puesto en las manos de los dueños y gerentes."

## **Regulaciones Corporativas**

- Rol y responsabilidad de la junta de directores y el comité de inspección.
- Controles internos y responsabilidad de la gerencia.
- Monitoreo de actividades así como inspecciones internas.

- Elementos de un código de conducta efectivo.
- Guía de Sentencias en el contexto Federal de E.U. y Sarbanes –Oxly.
- Componentes de un programa efectivo de obediencia corporativa.
- Responsabilidades de los contadores públicos, consultores y de los cuerpos reguladores. (EETF 14)

Recurso: Ethics Education in Business Schools: Report of the Ethics Education Task Force to AACSB Internal`s Board of Directors

### **Relación con los Esfuerzos de Acreditación: ABET**

- **Criterio 3c:** Diseño (y otros componentes) de Ética.
- **Criterio 3d:** Destrezas de Equipo Multidisciplinarias.
- **Criterio 3f:** Responsabilidad Ética Profesional.
- **Criterio 3h:** Entender el Impacto Social y Global de la Ingeniería.

### V. Estrategias Pedagógicas (Lista no exhaustiva)

- **Lectura:** Provee resúmenes y explicaciones de materiales a presentarse en clase de una manera formal o informal por el instructor.
- **Lecturas asignadas antes del módulo:** Se le asigna a los estudiantes lecturas y otras actividades para ayudarlos a prepararse para el módulo.
- **Escritura (Formal o Informal/Individual o Grupal):** Los estudiantes preparan un documento escrito ya sea individual o grupal, formal o informal , respondiendo al contenido del módulo.
- **Discusión (En clase y en grupos/Formal o Informal):** El instructor formula preguntas a los estudiantes para comenzar la discusión. Los estudiantes realizan presentaciones formales o informales respecto con las preguntas.
- **Actividades Grupales o individuales:** Los estudiantes se dividen en grupos para llevar acabo diferentes ejercicios. También llevan a cabo ejercicios individuales.
- **Debate:** Una forma de discusión donde el estudiante toma y defiende una posición.
- **Marco de Referencia:** El módulo provee marcos de referencia (proceso de toma de decisiones) o pruebas (acercamientos éticos, pruebas éticas)
- **Identificar y reforzar las aportaciones acertadas de los estudiantes:** El instructor enfatiza aquellos comentarios de los estudiantes que

anticipan los objetivos de aprendizaje del módulo.

## VI. Certeza del Aprendizaje ("Herramientas" y Descripciones)

- **Posiciones Claras:** Se le pide a los estudiantes que discutan o escriban acerca de aquellas partes del módulo donde encontraron más dificultad.
- **Escritos de dos Minutos (escritos en clase o escritos fuera de clase):** Los estudiantes escriben un breve ensayo que refleje su experiencia de aprendizaje.
- **Puntos de Discusión:** Una discusión formal o informal es sostenida en clase, de manera individual o en grupos, donde se reflexione sobre la experiencia de aprendizaje.
- **Observación de un Asesor/ Observador:** Un observador externo asiste a clase mientras se presenta el módulo y ofrece retroalimentación.
- **Formas (Evaluación) de Retroalimentación:** Documentos designados para ofrecer retroalimentación. (Por ejemplo: formas que tienen los estudiantes para calificar diferentes módulos.)
- **Herramientas para el Módulo de Instructor (Connexions® EAC):** La valoración de experiencias puede ser integrada para el desarrollo de las herramientas del Módulo de Instructor.
- **Evaluaciones Formales (Estudiantes y Pares):** Formas utilizadas por el departamento o por la universidad para recoger datos formales de evaluaciones.

## EAC Toolkit Instructor Module: Practical and Professional Ethics Pre-Test

### REFERENCE OR LINK TO STUDENT MODULE

- Link or Reference to the corresponding student module in Connexions® (cnx.org)
- Reference or Link to the corresponding student module. For example:
  - Link (URL) to a module or resource available online
  - Reference to a textbook case or exercise
  - Reference to a magazine or journal article
  - Reference to a news story
  - Reference to a movie or show
  - Etc.

### INSTRUCTOR RESOURCES(Sharing Best Practices in EAC!)

**This section contains information related to the above referenced Student Module. The intent and expectation is that the information contained in this section will evolve over time based on the experiences and collaborations of the authors and users of the Student Module and this Instructor Module. For example, the authors, collaborators or users can provide the following kind of information (mainly directed at or intended for instructors).**

#### Module-Background Information

Originally, this exercise was presented in a textbook by Gary B. Shelly, Thomas J. Cashman, Misty E. Vermaat entitled, *Discovering Computers 2005: A Gateway to Information, Web Enhanced-Complete*, Shelly Cashman Series, Course Technology: Boston, MA. P. 589. In its initial form, it prompted students to reflect on the distinction between legal and illegal, criminal and legitimate in the context of short scenarios taken from the area of computing. However, Dr. Cruz has redesigned this exercise to introduce basic ethical issues and skills in computing. While its first

instantiation occurred in a presentation in a retreat held in Marciao, Puerto Rico in 1999, other instantiations include its being a regular feature in introduction to computers classes, engineering ethics classes, faculty development workshops, and special ethics across the curriculum integration efforts in Electrical Engineering. In the last version, Luis Jimenez and Efrain O'Neill used this exercise as a pre- and a post-test activity to assess the effectiveness of their more expansive module for introducing engineering ethics to students in electrical engineering capstone design courses.

This Pre-Test has been developed and refined through a variety of National Science Foundation supported grants in ethics across the curriculum in practical and professional ethics, especially NSF SBR-09810253 (1998-2000) and NSF SES 0551779 (2006-2008).

## **Learning Objectives**

What are the intended learning objectives or goals for this module? What other goals or learning objectives are possible?

## **Skills Objectives**

- This activity is based on four skills for ethical empowerment that have been detailed in Cruz/Frey 2003: ethical awareness, ethical evaluation, ethical integration and ethical prevention.
  - This list of moral skills is by no means exhaustive or exclusive. For example, it does not cover moral imagination, moral creativity, becoming a member of a professional community, or perseverance.
  - Readers are encouraged to consult the moral development skills that are available in Kohlberg, Rest, Huff/Frey, and the widely accepted Hastings Center List. Bibliographical references below will provide ample resources that different institutions or groups can use to build a list of skills of moral development to fit their needs and resources.
1. **Ethical Awareness** consists of the student's ability to select and frame moral issues and problems that arise in ordinary, day-to-day research practice.

2. **Ethical evaluation** skills allow students to bring ethical principles, concepts, theories, and values to bear on the problems they identify in research scenarios and use these to accomplish moral reasoning and judgment.
3. **Ethical integration** skills give ethical principles, concepts, theories, and values a constitutive role in creating and designing solutions to moral problems and generating decision alternative that integrate moral (and non-moral) values.
4. **Ethical prevention** skills are employed to identify value conflicts inherent in research projects and the socio-technical systems into which they are integrated. Prevention skills move from early identification of these conflicts to the development of counter-measures that prevent them from developing into full-blown moral problems or dilemmas.
5. These objectives form a series in which the more complex skills presuppose and build upon the simpler ones: ethical evaluation takes place when awareness skills are mastered; integration presupposes evaluation and awareness; prevention builds upon the mastery of the three more basic skills. To reflect this serial relation of ethics objectives, ethics across the curriculum modules should be sequenced so that subsequent interventions build upon the skills mastered in earlier ones. This pre-test, by generating awareness, can help prepare the foundation for more advanced interventions.
6. Those who adopt this module are cautioned against taking this idea of sequential development to its extremes. The sequence is not unidirectional; students can and should work on maintaining awareness even after they have practiced prevention. More than one skill can be pursued at a time. Students could participate in EAC activities out of sequence and still benefit. But ordering these workshops sequentially and generally requiring students to move from awareness, through evaluation and integration, to prevention makes sense. In general, interventions targeting simpler skills should precede those targeting more complex and advanced skills.

**These content objectives come from AACSB criteria. They have been quoted from the AACSB Ethics Task Force Report.**

- **Ethical Leadership (EL):** (a) “Expanding...awareness to include multiple stakeholder interests and...developing and applying...ethical decision-making skills to organizational decisions in ways that are transparent to...followers.” (b) “Executives become moral managers by recognizing and accepting their responsibility for acting as ethical role models.”
- **Decision-Making (DM):** “Business schools typically teach multiple frameworks for improving students’ ethical decision-making skills. Students are encouraged to consider multiple stakeholders and to assess and evaluate using different lenses and enlarged perspectives.”
- **Social Responsibility (SR):** “Businesses cannot thrive in environments where societal elements such as education, public health, peace and personal security, fidelity to the rule of law, enforcement of contracts, and physical infrastructures are deficient.”
- **Corporate Governance (CG):** (a) “Knowing the principles and practices of sound, responsible corporate governance can also be an important deterrent to unethical behavior.” (b) “Understanding the complex interdependencies between corporate governance and other institutions, such as stock exchanges and regulatory bodies, can be an important factor in managing risk and reputation.”

### **Short Bibliography on Moral Development and Ethics Skills**

- Kohlberg, Lawrence. 1981. **The Philosophy of Moral Development: Essays on Moral Development**, vol.1. San Francisco: Harper and Row.
- Pritchard, Michael S. 1996. **Reasonable Children: Moral Education and Moral Learning**. Lawrence, KS: University of Kansas Press: 11.
- Rest, James, Narvaez, Darcia, Bebeau, Muriel, and Thoma, Stephen. 1999. **Postconventional Moral Thinking: a Neo-Kohlbergian Approach**. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Huff, Chuck and Frey, William. 2005. "Moral Pedagogy and Practical Ethics" in **Science and Engineering Ethics** 11(3): 394-397.
- Cruz, Jose and Frey, William. 2003. "An Effective Strategy for Integrating Ethics Across the Curriculum in Engineering: An ABET 2000 Challenge" in **Science and Engineering Ethics** 9(4): 546-547.

## Instructional / Pedagogical Strategies

Which pedagogical or instructional strategies are used or suggested for this module. (For example: Discussion/Debate, Decision-Making Exercise, Presentation, Dramatization or Role Playing, Group Task, Formal or Informal Writing, Readings, among others)

**This module employs the following pedagogical strategies:**

- **General Class Discussion:** Students read the scenarios and answer the questions. Then the instructor engages the class in a discussion of the first scenario. Taking the pre-test before the discussion "primes the pump" so to speak. It gets students thinking about ethics and computing and thus readies them for a productive discussion.
- **Cooperative Learning:** If the instructor has time, he or she can organize small group discussions of the scenarios in the Pre-Test. Students can be asked to reach an agreement on their assessment of a scenario, debrief to the instructor and the class, and reflect on the process of how they reached agreement. If they fail to reach agreement, they can be asked to reflect on the obstacles to consensus. Thus, students engage in cooperative learning and reflect on the dynamics of small group interaction.
- **Eliciting Knowledge:** With practice, the instructor leading the Pre-Test exercise can learn to elicit knowledge from students during the discussion. Certain phrase that students use "encode" the moral schemas we have developed to make sense of situations and help us recognize and respond to the moral aspects of our situations. In a section below, there is a list of student comments and a discussion of how these comments tie into certain ethics tests and the underlying ethical approaches. Students can become aware of ethics by, paradoxically, being led to see that they are already thinking ethically. This recognition of embedded ethical thought is a powerful tool for generating ethical awareness in students.
- **Critical Thinking:** This module can also be used to promote critical thinking skills. The discussion leader can underscore and classify the argument techniques students are using through metacomments. (E.g., You are making a use of analogical argumentation by comparing sending e-mails with making phone conversations.") The discussion

leader can also make just-in-time suggestions to students on how to formulate their arguments by helping them to see the relation between premises and conclusions, distinguishing the empirical and value components of ethical arguments, and discussing the difference between emotional and rational persuasion. Doing this through just-in-time insertions requires practice and patience but this exercise is an effective means to carry out these objectives.

- **Structured Discussion:** Ethics tests (reversibility, publicity, harm) are introduced into the second half of this exercise to provide students with aids in structuring their discussion of ethical issues and in making ethical arguments and justifications. The students discuss a scenario without the tests; then they discuss a scenario with the ethics tests. When asked to reflect on the two experience, they begin to see how ethical approaches can help us to hold structured and orderly conversations about even contentious ethical issues.
- **Pre-Module Skills:** This module is an introductory exercise designed to build basic skills in moral reasoning and judgment. As such it can be used at an introductory level with little or no advanced preparation. In fact, this activity has, as was mentioned above, been used as an assessment tool to gain a rough idea of where students are in their moral development. Using Kohlberg's scale of moral development, students can be roughly located in terms of pre-conventional, conventional, and post-conventional moral development by listening carefully to the kinds of justifications they provide for their positions vis a vis the scenarios.

## **Assessment / Assurance of Learning**

What assessment or assurance of learning methods are used or suggested for this module? (For example: 1-minute paper, Muddiest Point, Quiz/Test Items, Oral Presentation, Student Feed-back, among others). What did or didn't work?

EAC Matrix for Pre-Test

<https://cnx.org/content/m14464/>

This matrix maps the Pre-

Test on three assessment spaces by (1) locating it within the ADEM curriculum, (2) identifying the targeted moral learning objectives, and (3) singling out the AACSB ethics criteria targeted in the exercise.

### Muddiest Point Exercise

<https://cnx.org/content/m14464/>

This short assessment exercise allows students to reflect on the strong and weak points of this module.

### General EAC Module Assessment Form

<https://cnx.org/content/m14464/>

This brief assessment form, adopted from one used in EAC workshops by Michael Davis of IIT, provides a general comprehensive survey of the different aspects of this activity.

## **Pedagogical Commentary**

Any comments or questions regarding this module? (For example: suggestions to authors, suggestions to instructors (how-to), queries or comments directed to EAC community, pitfalls or frustrations, novel ideas/approaches/uses, etc.)

### **Pre-Test**

This exercise provides students from a variety of disciplines who are in their first or second year of college with basic skills to help them develop arguments that support or refute ethical positions. Also, it will allow students to practice skills that can be applied outside the context of computing. A textbook exercise provides the template from which this activity has been developed. Originally, it asked students to consider whether the activity depicted in a scenario constituted a computer crime. This modification provides more room for discussion, helps illustrate that ethical issues are not just "black or white," and allows students to discuss related ethical issues outside the context of computers and information and technology.

### **Step 1: Students individually evaluate and discuss whether scenarios are ethical**

- The first step of the exercise is to have students individually evaluate 8 to 10 scenarios using the following 3 questions:
- 1. Do you think this situation is common/realistic? (Yes or No)
- 2. Do you think this situation is ethical or unethical? (Ethical or Unethical)
- 3. Do you think others may disagree with you? (Yes or No)
- The first question emphasizes the fact that we are considering real-world issues. The second question asks students to provide an intuitive answer by evoking an honest, anonymous opinion on the issue. The third question serves to illustrate that the issues are not "black or white".
- Scenarios can be taken from a variety of sources: textbook exercises, newspapers, movies, and from any other source that suggests something provocative and realistic.

### **Step 2: Informal Discussion of Scenarios**

In step one, students begin by reflecting on the issues individually. In step two, the instructor leads an informal discussion of a few scenarios. For example, the class could consider whether using a computer at work to send e-mail to relatives is ethical. This simple statement can easily generate 20 to 30 minutes of lively discussion. Our experience has been that some students will advocate one extreme (that the action is unethical) while others will argue the other extreme (that the action is customary and ethically permissible). Many students will try to secure the middle ground by citing circumstances in which it is ethically permissible (when workers are taking a break) and when it is impermissible (when a worker spends too much time doing this).

**For example some specific examples from our students are following:**

- "I don't want to be treated as a slave or robot."
- "These people get paid well to work."
- "Some work hard, while others surf the Internet?"
- "As long as my boss doesn't see me ..."
- "I minimize the browser ..."
- "Maybe someone opens an e-mail with a virus ..."
- "Maybe the person doesn't have a PC at home?"
- "Isn't this similar to using the phone to call a friend?"
- "Everybody does it!"

This exercise gives students practice framing moral arguments. Students will offer analogies based on the telephone, fax, or regular mail. Many offer examples from their own real-world experiences. Discussing the scenarios familiarizes students with the complexity of the issues, gives them practice in drawing analogies with their own experiences, and helps them to frame moral arguments.

### **Step 3: Ethical Decision-Making Tests Provide Insight and Focus**

The informal group discussion sets up the next stage since students already have raised many relevant issues in their comments. In the third step, several intuitive ethical tests are applied to two or three of the scenarios.

#### **Ethics Tests**

- **Reversibility:** Would I think this a good choice if I were among those affected by it?

- **Publicity:** Would I want this action published in the newspaper?
- **Harm:** Does this action do less harm than a possible alternative?
- **Code Test:** Does this action violate a code provision?
- These tests help students to formulate supporting arguments that evaluate the scenarios. Often during the informal group discussion, these tests have already been employed either by the students themselves or informally by the instructor. In either case, it is important for students to realize that they are thinking already in ethical terms and that their ethical reflection is complex and sophisticated. It is also helpful to use local idioms for expressing these notions (especially in Puerto Rico). For example, the expression, "putting yourself in someone else's shoes" is a good way of presenting the reversibility test. This helps students realize that their parents, teachers, and religious leaders have passed on much of this "wisdom" to them.
- It is very helpful to refer to students' remarks as a means to explain the tests and help them realize that they already incorporate these notions in their decision-making.

#### **Step 4: Student Groups Re-evaluate Scenarios with Ethics Tests**

The next step allows students to apply the ethics tests. In groups of three or four, the students select two or three scenarios and re-evaluate them using the tests to sharpen their ethical arguments. The results are impressive: students quickly reach a consensus, back their positions with well-constructed ethical arguments, and emerge from the discussion with more confidence. They are, in short, ethically empowered. A debriefing session follows in which students summarize their group results with the rest of the class. This, in turn, generates more discussion.

#### **Step 5: Brief Discussion of the Importance of Ethics**

At this stage of the exercise a brief discussion on the importance of ethics helps synthesize the exercise. Issues that can be raised: (1) awareness that ethics affects our behavior, (2) incorporating ethical considerations early into the decision-making process helps to avoid ethical dilemmas later on, (3) we can learn from past problems and adjust future actions to avoid their repetition, (4) everybody practices ethics, not just the so-called expert, and

(5) generally speaking, "Good ethics is good business." We conclude the exercise with the slogan, "Be Ethical, be Wise."

### **Step 6: Some students want to learn more...where to go from here?**

Past experience indicates that this exercise has had an impact on students. Frequently, they ask for more information about ethics. We have made the following suggestions: take a formal course in engineering or business ethics, watch for ethical issues in the media, study professional and corporate codes of conduct, and do not ignore ethics-related chapters/excerpts available in many textbooks. Finally, we encourage them to discuss related situations (scenarios or experiences) with friends.

### **Conclusion**

- The goal is to promote ethical-empowerment in our students. What has impressed us most by this exercise is the way in which it changes the student's perspective on ethics in the direction of empowerment. In fact, it promotes ethical-empowerment in several ways:
- Students learn to recognize ethical problems in the real-world.
- Students discover that they unconsciously employ ethical concepts and principles in their thinking. Thus, using the ethics tests helps students to recognize and practice the ethics skills they already possess.
- It gives students practice (and confidence) in formulating ethical arguments.
- It excites an interest in ethics that often leads to follow-up activities.
- Instructors who are not experts in ethics can use this exercise and integrate it into their classes. In fact, by carefully selecting scenarios, instructors can help students to see how ethics is a natural and essential part of real-world engineering practice.

### **Appendix (Annotated)**

Additional information or annotations for instructors regarding the Student Module Appendix

## EAC Toolkit Instructor Module: Being An Ethical Job Candidate

### REFERENCE OR LINK TO STUDENT MODULE

- Link or Reference to the corresponding student module in Connexions® (cnx.org)
- Reference or Link to the corresponding student module. For example:  
**Module Sources**
  - IEEE Professional Employment Guidelines for Engineers and Scientists published by Stephen Unger in **Controlling Technology: Ethics and the Responsible Engineer**.
  - Cases based on situations presented to the author in Practical and Professional Ethics classes at the University of Puerto Rico at Mayaguez.
  - Case found at Online Ethics describing a surprise drug test during an interview. This case has been revised here to incorporate other student experiences.

### INSTRUCTOR RESOURCES(Sharing Best Practices in EAC!)

**This section contains information related to the above referenced Student Module. The intent and expectation is that the information contained in this section will evolve over time based on the experiences and collaborations of the authors and users of the Student Module and this Instructor Module. For example, the authors, collaborators or users can provide the following kind of information (mainly directed at or intended for instructors).**

#### **Module-Background Information**

Where did this module come from? (e.g. A workshop, news story, based on a movie, etc.) What condition is it in? (e.g. first draft, needs editing, publishable, etc.) How has it been used in the past? (e.g. in classroom, workshop activity, ethics debate, etc.) Other relevant or interesting details

This module comes from students who have shared their experiences as job candidates during practical and professional ethics classes held at the University of Puerto Rico at Mayaguez. It also comes from an attempt to disseminate and apply the Guidelines for Employment for Engineers and Scientists developed by the IEEE and published in Stephen Unger's book, **Controlling Technology**. (See complete references below.)

## **Learning Objectives**

What are the intended learning objectives or goals for this module? What other goals or learning objectives are possible?

## **Content Objectives**

The content objectives presented below come from the AACSB Ethics Education Task Force Report. A similar list could be developed using ABET a-k criteria.

## **Content Objectives**

- **Ethical Leadership (EL):** (a) “Expanding...awareness to include multiple stakeholder interests and...developing and applying...ethical decision-making skills to organizational decisions in ways that are transparent to...followers.” (b) “Executives become moral managers by recognizing and accepting their responsibility for acting as ethical role models.”
- **Decision-Making (DM):** “Business schools typically teach multiple frameworks for improving students’ ethical decision-making skills. Students are encouraged to consider multiple stakeholders and to assess and evaluate using different lenses and enlarged perspectives.”
- **Social Responsibility (SR):** “Businesses cannot thrive in environments where societal elements such as education, public health, peace and personal security, fidelity to the rule of law, enforcement of contracts, and physical infrastructures are deficient.”
- **Corporate Governance (CG):** (a) “Knowing the principles and practices of sound, responsible corporate governance can also be an important deterrent to unethical behavior.” (b) “Understanding the complex interdependencies between corporate governance and other

institutions, such as stock exchanges and regulatory bodies, can be an important factor in managing risk and reputation.”

**Below are four different sets of skills objectives:**

- Four levels of development spelled out by David R. Haws for Engineering Ethics
- Skill objectives used at UPRM in various EAC efforts
- The Hastings Center List
- A list presented by Huff and Frey (referenced below) that combines recent research in moral psychology with skills useful for students learning the practice and profession of computing that includes computer science, computer engineering, and software engineering

**Four Development Levels from Haws**

- Haws provides a development scale that measures different degrees and kinds of moral reasoning and moral autonomy. Success is measured in terms of accomplishing principle-based moral reasoning where principles are internalized and seen as the manifestation of a morally autonomous will
- **Instilling moral principles as dogma:** (A “minimalist approach that would leave our students with formulated dogma—principles of right and wrong such as the National Society for Professional Engineers (NSPE) Code of Ethics for Engineers—but without any insight into the genesis of these principles” (204))
- **Manipulating Moral Principles with Heuristics:** (“systematic procedures like problem-solving heuristics that focus on the piece-wise solution of simplified ethical dilemmas” (208) Example: Vivian Weil’s iterative (non-linear) design model which can be found in Davis, Ethics and the University.
- **Inducing Moral Principles through Case Studies:** (“ A macro-ethics approach—helping students to inductively construct a posteriori principles from case studies—goes beyond the simple statement or manipulation of principles, but falls short of linking personal moral principles to the larger, social context.” (204))
- **Understanding Moral Values through Meta-analysis:** (“students will need to not only encounter important ethical theories but will need

to experience the minds where those theories evolved. This can only be accomplished...with a critical reflection on primary source readings.” (209))

### **UPRM Ethical Empowerment Skills List**

- UPRM Objectives are described in the context of faculty development workshops in the Science and Engineering Ethics article by Cruz and Frey referenced below:
- **Ethical Awareness** is promoted by discussing cases and scenarios in which are embedded basic moral concepts (duty, right, good) and intermediate moral concepts (conflict of interest, privacy, confidentiality). By showing students how these concepts are present in everyday professional and occupation experience, ethical awareness dramatizes the importance of ethics in everyday experience and emphasizes the need to understand these ethical considerations as thoroughly as possible.”
- **Ethics and the University Ethical Evaluation:** “ the ability to assess a product or process in terms of different ethical approaches such as utilitarianism, rights theory, deontology, and virtue ethics.” This skill can be demonstrated by ranking solution alternatives to decision points provided in cases and scenarios in terms of ethics tests that partially encapsulate ethical theory. Tests such as reversibility, harm, and publicity are useful in this context because they (partially) embody the ethical approaches of deontology, utilitarianism, and virtue ethics, respectively. (See Davis - for more about the ethics tests and for more ethics tests.)
- **Ethical Integration:** “the ability to integrate—not just apply—ethical considerations into an activity (such as a decision, product or process) so that ethics plays an essential, constitutive role in the final results.” It can also be described as the skill of systematically designing solutions that integrate moral value that can be manifested when students use a decision-making heuristics such as the Software Development Cycle or the Seven-Step Decision-Making Framework to resolve problems raised in ethics cases or scenarios.
- **Ethical Problem Definition:** the ability to (a) uncover potential ethical and social problems latent in a socio-technical system and (b)

develop effective counter-measures to prevent these latent problems from materializing or to minimize their harmful or negative impact. Ethical Problem Definition makes use of socio-technical system analysis to uncover latent ethical problems and formulate effective counter/preventive measures.

- **Value Realization:** “the ability to recognize and exploit opportunities for using skills and talents to promote community welfare, enhance safety and health, improve the quality of the environment, and (in general) enhance wellbeing. It involves employing technical knowledge, experience, and expertise toward the end of realizing moral values.

### **Hastings Center Goals**

- Stimulate the moral imagination of students
- Help students recognize moral issues
- Help students analyze key moral concepts and principles
- Elicit from students a sense of responsibility
- Help students to accept the likelihood of ambiguity and disagreement on moral matters, while at the same time attempting to strive for clarity and agreement insofar as it is reasonably attainable (from Pritchard, Reasonable Children, 15)

### **Goals for ethical education in science and engineering derived from psychological literature (Huff and Frey)**

- Mastering a knowledge of basic facts and understanding and applying basic and intermediate ethical concepts.
- Practicing moral imagination (taking the perspective of the other, generating non-obvious solutions to moral problems under situational constraints, and setting up multiple framings of a situation)
- Learning moral sensitivity
- Encouraging adoption of professional standards into the professional self-concept
- Building ethical community

## **Instructional / Pedagogical Strategies**

Which pedagogical or instructional strategies are used or suggested for this module. (For example: Discussion/Debate, Decision-Making Exercise, Presentation, Dramatization or Role Playing, Group Task, Formal or Informal Writing, Readings, among others)

**This module employs the following pedagogical strategies:**

- **Formal Presentation:** Instructor presents IEEE Guidelines to students along with cases. Presentation can include other experiences that students and instructors have had concerning situations that arise in job searches, interviews, and negotiations over employment contracts.
- **Case Discussion:** Students discuss cases as a class or in small groups. The advantage of having students break into smaller groups is that there is more opportunity for individual discussion.
- **Informal Writing:** This module can be organized to allow for informal writing. For example, students could begin the module by writing informally over whether they think there are ethical problems that arise in job candidacy and, if so, what are the problems they have experienced. If students work through the decision points posed by the cases, the discussion groups could prepare written debriefing summaries.
- **Cooperative Learning:** Students are divided into teams to discuss different cases, conceptual difficulties, respond to decision points, and evaluate the solution alternatives given after some of the cases.
- Other possibilities lie in converting this module into Pre-Test or Gray Matters form. This would allow for different pedagogical strategies. Also, some of these cases have been successfully used in the UPRM Practical and Professional Ethics Bowl debates.
- **Eliciting Knowledge:** Skillily led discussions with questions and just-in-time comments can help to elicit knowledge from students and lead them to reflect on and structure better their knowledge and experience.

## **Assessment / Assurance of Learning**

What assessment or assurance of learning methods are used or suggested for this module? (For example: 1-minute paper, Muddiest Point, Quiz/Test Items, Oral Presentation, Student Feed-back, among others). What did or didn't work?

### **Informal Assessment**

- Preparing solution evaluation tables would help to provide assessment of decision making and ethical evaluation skills of students.
- Preparing a socio-technical system table outlining the components of the interviewing situation would help students to define problems and assess this activity.
- Students could role play as job candidates and interviewers and write scripts which would also contribute to assessment efforts.

### **EAC matrix**

<https://cnx.org/content/m14479/>

This EAC Matrix identifies the learning objectives of the corresponding student module by cross referencing the moral development objectives, accreditation criteria, and the curricular "space" the module fills.

### **Muddiest Point Assessment Form**

<https://cnx.org/content/m14479/>

The attached word document provides a handout to assess this module in terms of its

weakest and strongest  
points.

### Module Assessment Form

<https://cnx.org/content/m14479/>

This figure contains an  
assessment handout that  
modifies a form developed  
by Michael Davis for IIT  
EAC workshops.

### Pedagogical Commentary

Any comments or questions regarding this module? (For example: suggestions to authors, suggestions to instructors (how-to), queries or comments directed o EAC community, pitfalls or frustrations, novel ideas/approaches/uses, etc.)

- **This module combines presentation and discussion formats:** First presented by William Frey before students in a Mechanical Engineering Capstone Design course in spring 2007, this module integrates instructor presentation and student discussion. The student discussion begins with the class interacting with the presenter and then moves to more focused discussions of case scenarios in small student groups. This first presentation of the module followed closely the slides in the PowerPoint file provided below.
- **Small Group Discussion Worked Well:** After a quick preview of the Employment Guidelines, the important concepts (e.g., Sincere Interest), and the cases, the students were divided into small groups of four (the entire class consisted of around 60 students) and each group was assigned one of the 10 cases provided in the presentation. Students discussed the cases and responded to the decision points in the

scenarios by designing value-realizing solutions. Then around half of the 10 groups debriefed. The entire activity took three hours.

- **Student Mentors:** In presenting the module before a large class of over 60 students, the instructor had help from mechanical engineering students taking business ethics who mentored their mechanical engineering peers. Business Ethics student mentors floated from one small discussion group to another to help these groups integrate values and ethics tests into their solutions to the decision points. Student mentoring has the potential to play a greater role in ethics integration exercises and also helps establish productive links between freestanding ethics courses and EAC integration exercises.
- **Module could be converted into Gray Matters Format:** Faculty members attending the presentation suggested providing solution alternatives after the cases and having the students rank and evaluate these alternatives. They felt this would allow for a more focused use of the ethics tests (reversibility, harm, publicity) as well as the values test. The student module developed after the presentation includes solution alternatives to the decision points of the scenarios.
- **Students will express interest and want to share their experiences:** Leaving space in the presentation for student comments led to several, unexpected but beneficial incidents. For example, students discussed non-disclosure clauses they had encountered in internship work and one student described his experience with a drug test held during an interview. Several students had specific questions about confidentiality and job mobility issues and one student discussed concerns about working on weapons projects one-on-one with the presenter.

### Module Presentation

<https://cnx.org/content/m14479/>

PowerPoint presentation  
upon which the student  
module is based.

### New Scenarios from Spring and Fall 2007

- The student module, **Being and Ethical Job Candidate**, has been taught two times now, the first in the Spring semester of 2007 and the second in the Fall semester of 2007. During these activities, participants suggested several scenarios which could and should be developed into cases for future versions of this workshop
- **Scenario 1:** Students in a Mechanical Engineering design class spend part of their semester working on site at a local industry. Even though this is primarily for academic credit and experience, students during their work will have access to confidential proprietary information. To prevent this from falling into the hands of competitors, students are required to sign "non disclosure agreements." In one semester, the non disclosure agreement was so strict that the professor did not have enough information to evaluate the students' work for their grade.
- **Scenario 2:** A recruiter at the UPRM Job Fair recently complained about several UPRM students he invited to his company for interviews. Even though they pretended to have a "serious interest" in the job and accepted travel funds to fly to the interview, it soon became apparent that their interest was not serious. The recruiter pointed out to a faculty member that this would hurt future students at UPRM because this company would be reluctant to recruit there in the future.
- **Scenario 3:** A course in mechanical engineering requires that students work on site at a local industry. At the last minute, the human resources department told the professor of the course that all students who planned to work there had to take a drug test. Many of the students objected and told the professor that they would not have signed up for the course if they had known that they would have had to take this drug test. Was it proper to require that the students undergo a drug test? With what kind of advance warning is required in this situation? Is it the violation of UPRM policy or any university's policy to require drug tests in these circumstances? Could universities develop procedures to prevent these kinds of problems in the future? What kind of procedures?

## Appendix (Annotated)

## **Bibliographical Information**

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8. Victoria S. Wike, "Professional Engineering Ethical Behavior: A Values-based Approach". *Proceedings of the 2001 American Society for Engineering Education Annual Conference and Exposition*, Session 2461.
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10. Stephen H. Unger (1994) *Controlling Technology: Ethics and the Responsible Engineer*. New York: John Wiley and Sons: 315-325 (Reprinted with permission of IEEE).
11. Robert C. Solomon (1999) *A Better Way to Think About Business: How Personal Integrity Leads to Corporate Success*. Oxford, UK: Oxford University Press: 71-114.
12. **Science and Engineering Ethics**, David R. Haws (2004) **The Importance of Meta-Ethics in Engineering Education**, 10(2): 204-

210.

13. See above link to Online Ethics, [www.onlineethics.org](http://www.onlineethics.org), for case on which “Oh, By the Way” is based.

Additional information or annotations for instructors regarding the Student  
Module Appendix

## Ethics Bowl for Environments of the Organization--Instructor Module (Bilingual Version)

This module provides an English translation for "Módulo para Instructores - El Tazón de la Ética Para Ambientes de la Organización" (m33090), an Instructor Module to "Ethics Bowl for Environments of the Organization" (m21191) prepared by Ramon Ramos-Chevres who observed this activity on December 7 and 9, 2009. These modules have been developed in conjunction with the EAC Toolkit project (Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices, NSF SES 0551779).

### **Módulo para Instructor/a**

Instructor Module

Título del módulo de estudiantes: El Tazón de la Ética para Ambientes de la Organización

Student Module Title: Ethics Bowl for Environments of the Organization

### **I. Resumen**

Las actividades que se sugieren en este módulo proveen a los estudiantes un ambiente de aprendizaje colaborativo en donde existe una continua discusión, análisis y toma de decisiones éticas. Las actividades se basan en análisis de casos reales en el mundo de los negocios. Este módulo asume que los estudiantes tengan conocimiento sobre: Pruebas de Ética y el valor de los Marcos de Referencia para la toma de decisiones. Dichos temas se discuten en el módulo titulado "Three Frameworks for Ethical Decision-Making and Good Computing Reports"(m13757), publicado en Connexions®. Los estudiantes tendrán la oportunidad de incorporar consideraciones éticas para defender sus puntos de vista. Distintos ejercicios en forma de debate serán realizados por los estudiantes para la aplicación de análisis y toma de decisiones éticas en el ambiente de las organizaciones. Los estudiantes tendrán acceso a los diferentes casos reales en los enlaces electrónicos que se encuentran en el módulo, de manera que, podrán estudiarlos y seguir las instrucciones para llevar a cabo el debate de una forma ordenada y que cumpla con los objetivos. Este módulo se dirige a ofrecer una calidad memorable en la enseñanza de los estudiantes.

## **I. Summary**

This module's activities provide the student with a collaborative learning environment in which there is continual discussion, analysis, and ethical decision-making. These activities are based on analysis of realistic cases in the business world. This module also assumes that students know ethics tests along with the having a sense of the value of frameworks for decision-making. These themes are discussed in another module entitled "Three Frameworks for Ethical Decision-Making and Good Computing Reports" published in Connexions®. Students will have the opportunity to employ ethical considerations to defend their points of view. Different exercises, taking the form of a debate, will be realized by the students in order to apply the skills of analysis and ethical decision making in the context of organizational environments. Students will have access to different realistic cases through hyperlinks provided in the module. This will enable them to study different areas in business ethics. The module also provides instructions to help them conduct themselves in the debate in an ordered, civil fashion consistent with the module's learning objectives. This module is designed to offer a memorable educational experience for students.

## **II. Objetivos**

- Ofrecer a los estudiantes la oportunidad de practicar la integración de las consideraciones éticas aprendidas en otro módulo previamente estudiado: “Three Frameworks for Ethical Decision-Making and Good Computing Reports (m13757)”.
- Lograr que los estudiantes desarrollen destrezas en resolución de problemas éticos, comunicación y trabajo en equipo.
- Exponer a los estudiantes en un ambiente público (debates, presentación oral) donde desarrollen sensibilidad moral ante los distintos ambientes de negocios organizacionales.
- Provocar la creatividad de los estudiantes por medio del análisis y las presentaciones orales.
- Lograr que los estudiantes vean cuan trabajoso es defender posiciones éticas.
- Lograr que los estudiantes obtengan conocimientos por medio del aprendizaje colaborativo.

## **II. Objectives**

- To offer students the opportunity to practice the integration of ethical considerations learned in a previously studied module, Three Frameworks for Ethical Decision-Making and Good Computing Reports (m13757).
- To bring it about that students develop skills in resolving ethical problems, communication skills, and skills pertinent to working in teams.
- To expose students to a public environment (debates, oral presentations) where they can develop moral sensitivity before distinct (business) organizational environments.
- To stimulate students' creativity by means of analysis and oral presentation.
- To bring it about that students can see how difficult it is to defend ethical positions.
- To bring it about that students can obtain knowledge by means of collaborative learning.

### **III. Estrategias Sugeridas para Cumplir con los Objetivos (Se espera que estas estrategias de aprendizaje aporten al desarrollo global del estudiante.)**

- Se le asigna el módulo a los estudiantes al principio de semestre o trimestre escolar, de manera que, puedan desarrollar los preparativos correspondientes en el transcurso. Los estudiantes necesitan tiempo para desarrollar las destrezas necesarias para realizar las actividades, estudiar los casos, aprender a analizar los casos de una forma ética, organizarse como grupo y familiarizarse con las instrucciones que se ofrecen en el módulo correspondiente.
- Los estudiantes se dividen en dos grupos: A y B. Cada grupo se divide en dos equipos: (A) 1 y 2, (B) 1 y 2.
- Un equipo realizará su presentación y defenderá su posición ante preguntas y cuestionamientos de parte del otro equipo, del instructor y de los demás estudiantes. (a) Un equipo presenta su análisis del caso en un espacio de siete minutos; (b) el otro equipo comenta acerca de esa presentación (se requiere más destrezas de escuchar activamente que destrezas de refutación); (c) el equipo que presenta, concluye, respondiendo al comentario (requiere clarificaciones adicionales de su

posición); (d) finalmente, el equipo que presenta contesta preguntas que realizan el instructor y los demás estudiantes.

- Se debe prevenir que los estudiantes compitan sin una debida preparación.
- Se debe motivar a los estudiantes a que utilicen las herramientas de análisis para tomar decisiones éticas que tienen a su disposición.

### **III. Strategies Suggested in order to Achieve Learning Objectives (It is expected that these learning strategies will bring about the global development of the student)**

- This module should be assigned to the students at the beginning of the quarter or semester in a way that allows them to prepare properly for the activity. Students need time to learn the skills necessary for realizing activities, studying cases and learning how ethically to analyze case studies. They also need time to organize themselves as a group and to familiarize themselves with the instructions offered in the corresponding student module(s).
- Students are divided into two groups: A and B. Each group is divided into two further groups (A) 1 and 2 and (B) 1 and 2.
- Each team gives a presentation and defends their positions in the face of questions and challenges on the part of another team, the instructor, and other students. (a) One team presents its case analysis in seven minutes; (b) the other team comments on this presentation (which requires active listening and argumentative skills); (c) the first team concludes by responding to the commentary of the other team (which requires additional clarification of their position); (d) finally, the first team answers questions put forth by the instructor and the other students.
- Students should not compete unless they have thoroughly prepared the pool of cases as well as the accompanying decision-making tests and frameworks.
- Students should be motivated to utilize the provided analytical tools for making ethical decisions.

### **IV. Roles del Instructor/a y del Estudiante en la actividad del Tazón de la Ética en Ambientes de la Organización**

## **IV. Instructor and Student Roles for the Ethics Bowl for the Environments of the Organization**

### **Instructor**

- Establece las reglas de la competencia (Se incluyen en el módulo de estudiantes): Límites de tiempo en la presentación, orientación a los competidores, criterios de evaluación.
- El instructor es el anfitrión de la competencia; asume una posición seria y de liderazgo; es buena idea que su vestimenta para esta ocasión sea una formal, relacionada con su rol de anfitrión.
- Sigue al pie de la letra las reglas de la competencia.
- Administra el tiempo para cumplir con normas establecidas.
- Estructura un diálogo, de la forma preguntas/ respuestas, con los equipos que presentan y con los demás estudiantes.
- Ofrece retroalimentación al equipo que estuvo a cargo de la presentación al final de la clase.
- Ofrece comentarios y sugerencias a los equipos que así lo ameriten.

### **Instructor**

- Set forth the competition's rules as given in the student module. Limit the time for each presentation, orient the competing teams, and establish evaluation criteria.
- The instructor hosts the competition and assumes a position of leadership. It is even a good idea to dress up for the occasion with formal wear.
- She or he is responsible for making sure that students follow the rules of the competition to the letter.
- She or he administers the time in order to comply with established norms.
- The instructor structures a dialogue through questions and short commentaries with the teams and with the audience.
- The instructor provides feedback to the presenting team after the competition.
- Finally, the instructor offers commentaries and suggestions to the teams as these are required.

## **Estudiantes (Recordemos que en esta dinámica el trabajo colaborativo entre los estudiantes es esencial para maximizar su propia enseñanza)**

- Asumirán una participación activa en el proceso de los debates.
- Serán los jueces de las controversias donde se confronten los valores éticos.
- Ofrecerán estrategias que permitan remediar alguna situación ética.
- Escucharán con atención las ponencias y estarán preparados para argumentar utilizando sus conocimientos adquiridos.
- Evaluarán a sus pares por medio de unas formas que le administra su instructor/a y, además, podrán autoevaluarse. (Esto para que el instructor pueda llevar el progreso del estudiante de forma ágil y organizada)

## **Students**

- Students will assume active participation in the debates.
- Students will be judges in controversies where ethical values conflict with one another.
- Students will offer strategies that permit the remediation of any ethical situation.
- Students will listen attentively to the commentaries of their peers and will be prepared to offer arguments that make use of their acquired knowledge.
- Students will evaluate their peers by means of forms provided by the instructor and, in addition, will carry out self-evaluations. (This last so that the instructor can bring about student progress in an agile and organized form.)

## **EAC Toolkit Project**

This module is a WORK-IN-PROGRESS; the author(s) may update the content as needed. Others are welcome to use this module or create a new derived module. You can COLLABORATE to improve this module by providing suggestions and/or feedback on your experiences with this module.

Funded by the National Science Foundation: "Collaborative Development of Ethics Across the Curriculum Resources and Sharing of Best Practices," NSF-SES-0551779

## EAC Toolkit - Instructor Module for UPRM Ethics Bowl Activity

### REFERENCE OR LINK TO STUDENT MODULE

This Ethics Bowl Instructor Module corresponds to the student module, **EAC Toolkit - UPRM Ethics Bowl - IIT Summer Institute Follow-up** (see pre-requisite link on the right). The student module is part of the Corporate Governance course published in Connexions (col10396). First implemented as a capstone activity for engineering ethics classes (at the suggestion of Robert Ladenson of IIT who originated the Intercollegiate Ethics Bowl held at the annual meetings of the Association for Practical and Professional Ethics), this activity was reported on in its initial stages by Dr. Jose Cruz during an NSF-funded workshop on Ethics Across the Curriculum led by Michael Davis and carried out at the Illinois Institute of Technology in 2003. Since then, the activity has undergone several revisions. This module and the student module link to Dr. Cruz's report. But they also include material added and revised since this report. By collecting this material in the student and instructor modules, readers can see how the competition has evolved as well as learn how it can be adapted to different learning situations.

### INSTRUCTOR RESOURCES (Sharing Best Practices in EAC!)

**This section contains information related to the above referenced Student Module. The intent and expectation is that the information contained in this section will evolve over time based on the experiences and collaborations of the authors and users of the Student Module and this Instructor Module. For example, the authors, collaborators or users can provide the following kind of information (mainly directed at or intended for instructors).**

#### Module-Background Information

Where did this module come from? (e.g. A workshop, news story, based on a movie, etc.) What condition is it in? (e.g. first draft, needs editing, publishable, etc.) How has it been used in the past? (e.g. in classroom, workshop activity, ethics debate, etc.) Other relevant or interesting details

Robert Ladenson describes the growth of the Ethics Bowl concept in his paper, "The Educational Significance of the Ethics Bowl. Currently, he directs an Intercollegiate Ethics Bowl consisting of regional competitions and a national competition held annually at the meetings of the Association for Practical and Professional Ethics. The ICEB has over the years developed prestige and stature including winning the American Philosophical Association prize for Excellence and Innovation in Philosophy Programs.

The Puerto Rican instantiation of the competition in Engineering and Corporate Governance classes represents something of a de-evolution of the concept. Ladenson began the competition within his school, the Illinois Institute of Technology; then it grew into its present form. At UPRM, we have brought the competition back into the classroom where it serves as the capstone activity for classes in Practical and Professional Ethics. With the minimal modifications we have made, it has turned into a very powerful classroom tool for teaching different aspects of Practical and Professional Ethics.

**This particular version of the Ethics Bowl has gone through four stages.**

- First, judges from Humanities and Engineering were invited to the class, and, on a Monday-Wednesday-Friday schedule within the confines of a 50 minute class, the entire competition took place and scores were calculated and announced. Each student team debated twice. But assessment results showed that students wanted more time to carry out each stage of the competition and they wanted more feedback from the judges.
- For this reason, the second phase of the competition was carried out during the longer class sessions of the Tuesday-Thursday schedule. While students had more time to formulate their arguments and

responses, they still asked for a more relaxed schedule that included more feedback from the judges.

- In the third phase, the debates were held outside the regular class schedule as determined by the students, usually on Saturdays and holidays. While this generally worked well for the students, it became difficult to find engineering and humanities faculty members willing to give up 6 to 8 hours of their weekend.
- In the fourth phase, two student debating teams compete during the regular Monday-Wednesday-Friday schedule. The first team defends its case in the first class period. The second receives and discusses its case in the following class period. Along with the two debating teams, two peer review teams serve as judges asking questions during the questioning period and scoring at the end of each class period. Finally, a third class period is given over to the peer review teams announcing and explaining their scoring. The advantage of this version of the competition is it solves both the time and feedback concerns that persisted through the prior instantiations of the debate.

The authors of this module have discussed issues concerning the integration of the Ethics Bowl into the classroom in a paper entitled, "The Ethics Bowl in Engineering Ethics at the University of Puerto Rico - Mayaguez.

(Teaching Ethics, 4(2), Spring 2004: 15-32.) This paper discusses the assessment methodology used and summaries of the assessments of the first two years of the competition. After itemizing what the authors believe are the considerable accomplishments of the classroom activity, it goes on to mention several ethics bowl challenges. Ethics bowl assessment has continued after the publication of this article. Two particular challenges have emerged: clarifying as much as possible the judging criteria and providing the debating teams as much constructive feedback as possible. This instructor module and the corresponding student module describe ethics bowl innovations that attempt to respond to these assessment issues.

An article by Michael Davis, "Five Kinds of Ethics Across the Curriculum: An Introduction to Four Experiments with One Kind", discusses this classroom use of the Ethics Bowl as an instance of "professional ethics across the curriculum." In a footnote worth quoting, Davis distinguishes the Engineering Ethics Bowl held at UPRM from the Intercollegiate Ethics

Bowl that has come to form a central part of the yearly APPE meetings: "This description of the ethics bowl differs from Robert F. Ladenson, "The Educational Significance of the Ethics Bowl," Teaching Ethics 1(1) March 2001: 63-78, in at least three ways. First, it describes the process of transplanting the ethics bowl to a more or less non-English speaking environment. Second, it it describes an effort to use the ethics bowl for professional ethics across the engineering curriculum (rather than, as Ladenson presents it, use it to do social issues across the curriculum). And third, it it describes the process of making the ethics bowl fit the time-constraints of an ordinary (engineering) classroom."

**We add three further distinctions to Davis'.**

- First, we have sought to use the ethics bowl as a way to generate feedback for students on their skills in ethical decision-making. Three classes are devoted to each competition. The third class provides an effective debriefing on the competition. It is not always easy for students to receive such feedback, but debriefing activities help them to interpret feedback and put it to good use.
- The ethics bowl provides an excellent opportunity for students to refine their understanding of what Rest terms "intermediate moral concepts." Examples of these concepts include "paternalism", "conflict of interest", "faithful agency", "public wellbeing", and "collegiality". By choosing cases that explore the boundaries of these concepts, the ethics bowl can be used as a way of proceeding from clear instances of these concepts to more problematic instances. This activity of prototyping forms an essential part of our coming to understand the thick, complicated moral concepts so essential to everyday moral reasoning.
- Studies like the Hitachi Report demonstrate that much of the moral decision-making that our students will be exercising will be shaped and constrained by the organizational environments in which they work. Companies built around financial objectives elicit one kind of moral advocacy while those built around customer- or quality-oriented standards require quite different strategies. With carefully chosen cases, the ethics bowl can recreate these environments to allow students to practice decision-making under real world constraints. The classroom becomes an "ethics laboratory".

## Learning Objectives

What are the intended learning objectives or goals for this module? What other goals or learning objectives are possible?

Below are different lists of content and skill objectives of the ethics bowl. Not all of them apply at once. But they can be bundled together to fit different forms or instantiations. For example, a Corporate Governance ethics bowl would differ from an Engineering Ethics Bowl in terms of content objectives. This difference could be reflected in case selection, especially through the different basic and intermediate moral concepts covered by a case. The same would apply to a list of skill objectives; not all the UPRM skills could be covered in a given case or even a given competition. But a wide range of cases selected for student preparation could at least touch upon these skills.

Content Objectives come from the AACSB Ethics Education Task Force Report. In the Corporate Governance class (Connexions course, col10396), a special effort has been made to make the ethics bowl responsive to these content requirements.

### Content Objectives

- **Ethical Leadership (EL):** (a) “Expanding...awareness to include multiple stakeholder interests and...developing and applying...ethical decision-making skills to organizational decisions in ways that are transparent to...followers.” (b) “Executives become moral managers by recognizing and accepting their responsibility for acting as ethical role models.”
- **Decision-Making (DM):** “Business schools typically teach multiple frameworks for improving students’ ethical decision-making skills. Students are encouraged to consider multiple stakeholders and to assess and evaluate using different lenses and enlarged perspectives.”
- **Social Responsibility (SR):** “Businesses cannot thrive in environments where societal elements such as education, public health, peace and personal security, fidelity to the rule of law, enforcement of contracts, and physical infrastructures are deficient.”
- **Corporate Governance (CG):** (a) “Knowing the principles and practices of sound, responsible corporate governance can also be an

important deterrent to unethical behavior.” (b) “Understanding the complex interdependencies between corporate governance and other institutions, such as stock exchanges and regulatory bodies, can be an important factor in managing risk and reputation.”

### **UPRM Ethical Empowerment Skills List**

- UPRM Objectives have been taken from SEE, 546-547:
- **Ethical Awareness:** “the ability to perceive ethical issues embedded in complex, concrete situations. It requires the exercise of moral imagination which is developed through discussing cases that arise in the real world and in literature.”
- **Ethical Evaluation:** “ the ability to assess a product or process in terms of different ethical approaches such as utilitarianism, rights theory, deontology, and virtue ethics.” This skill can also be demonstrated by ranking solution alternatives using ethics tests which partially encapsulate ethical theory such as reversibility, harm, and publicity.
- **Ethical Integration:** “the ability to integrate—not just apply—ethical considerations into an activity (such as a decision, product or process) so that ethics plays an essential, constitutive role in the final results.”
- **Ethical Prevention:** the ability to (a) uncover potential ethical and social problems latent in a socio-technical system and (b) develop effective counter-measures to prevent these latent problems from materializing or to minimize their harmful or negative impact. Ethical is an adjective that modified “prevention”; hence ethical prevention does not mean the prevention of the ethical.
- **Value Realization:** “the ability to recognize and exploit opportunities for using skills and talents to promote community welfare, enhance safety and health, improve the quality of the environment, and (in general) enhance wellbeing.

### **Hastings Center Goals**

- Stimulate the moral imagination of students
- Help students recognize moral issues
- Help students analyze key moral concepts and principles
- Elicit from students a sense of responsibility

- Help students to accept the likelihood of ambiguity and disagreement on moral matters, while at the same time attempting to strive for clarity and agreement insofar as it is reasonably attainable
- (from Pritchard, Reasonable Children, 15)

### **Goals for ethical education in science and engineering derived from psychological literature (Huff and Frey)**

- Mastering a knowledge of basic facts and understanding and applying basic and intermediate ethical concepts.
- Practicing moral imagination (taking the perspective of the other, generating non-obvious solutions to moral problems under situational constraints, and setting up multiple framings of a situation)
- Learning moral sensitivity
- Encouraging adoption of professional standards into the professional self-concept
- Building ethical community

The figure below provides an EAC Matrix used at the University of Puerto Rico at Mayaguez in the College of Business Administration. It also separates the objectives mentioned above into primary and secondary areas of focus. Finally, it imports information as to whether the actual outcomes meet the objectives.

Ethics Bowl Student Module Matrix

<https://cnx.org/content/m14387/>

This Matrix identifies the learning objectives of the corresponding student module by cross referencing the moral development objectives, accreditation criteria and the curricular "space" the module fills.

## **Instructional / Pedagogical Strategies**

Which pedagogical or instructional strategies are used or suggested for this module. (For example: Discussion/Debate, Decision-Making Exercise, Presentation, Dramatization or Role Playing, Group Task, Formal or Informal Writing, Readings, among others)

**This module employs the following pedagogical strategies:**

- **Informal Writing:** Students prepare their cases by writing short summaries.
- **Formal Writing:** After ethics bowl competition, students in teams prepare a formal, in-depth case analysis of the case they debated during the competition.
- **Cooperative Learning:** Students are divided into teams to prepare for debate, carry out debate, peer review as judges other debates, and prepare an in-depth follow-up analysis. They also prepare preliminary and final self-evaluations to assess the effectiveness of their work together as teams.
- **Pre-Debate Skills:** The ethics bowl requires considerable preparation. Students need practice with ethical and practical frameworks as well as work on researching cases and working with the basic and intermediate moral concepts posed in the cases. Students also need an orientation to the competition that includes the rules, time line, and debating and presenting strategies. Finally, it is important to explain carefully to students the ethics bowl scoring criteria.

## **Assessment / Assurance of Learning**

What assessment or assurance of learning methods are used or suggested for this module? (For example: 1-minute paper, Muddiest Point, Quiz/Test Items, Oral Presentation, Student Feed-back, among others). What did or didn't work?

The figures below provide handouts for assessing this module. The Ethics Bowl scoring sheets contained in the Student Module also provide excellent means for assessing this activity.

## Muddiest Point Assessment Form

<https://cnx.org/content/m14387/>

The attached word document provides a handout to assess this module in terms of its weakest and strongest points.

## Module Assessment Form

<https://cnx.org/content/m14387/>

This figure contains an assessment handout, a modification of a form developed by Michael Davis for IIT EAC workshops.

## **Pedagogical Commentary**

Any comments or questions regarding this module? (For example: suggestions to authors, suggestions to instructors (how-to), queries or comments directed to EAC community, pitfalls or frustrations, novel ideas/approaches/uses, etc.)

- Case selection is everything. Identify the moral concepts you wish to cover. Then choose cases that involve these concepts. The debate itself, especially the question and answer session with the judges, can be used to generate a discussion of these concepts.
- The Ethics Bowl is definitely a student-centered activity. It is best for the teacher to assume the role of moderator and intervene only to keep

the discussion focused. If students are properly oriented for the competition, then they assume responsibility themselves for keeping the debate orderly.

- Debriefing is important. Students get plenty of feedback from the competition and need help interpreting it and receiving it constructively. The peer review students also need advice on how to deliver the feedback proactively. We tend to approach the debate from the standpoint of the virtue of reasonableness and provide students with plenty of opportunities to practice this virtue before the competition.

## **Appendix (Annotated)**

### **Bibliographical Information**

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Additional information or annotations for instructors regarding the Student Module Appendix

## Módulo para Instructores -- El Tazón de la Ética Para Ambientes de la Organización

Este módulo para instructores ha sido desarrollado para ayudar aquellos que se interesen por enseñar el módulo de estudiantes, "Ethics Bowl for Environments of the Organization" (m21191)

### **Módulo para Instructor/a**

Título del módulo de estudiantes: El Tazón de la Ética para Ambientes de la Organización (m21191)

#### **I. Resumen**

Las actividades que se sugieren en este módulo proveen a los estudiantes un ambiente de aprendizaje colaborativo en donde existe una continua discusión, análisis y toma de decisiones éticas. Las actividades se basan en análisis de casos reales en el mundo de los negocios. Este módulo asume que los estudiantes tengan conocimiento sobre: Pruebas de Ética y el valor de los Marcos de Referencia para la toma de decisiones. Dichos temas se discuten en el módulo titulado “Three Frameworks for Ethical Decisions”, publicado en Connexions®. Los estudiantes tendrán la oportunidad de incorporar consideraciones éticas para defender sus puntos de vista. Distintos ejercicios en forma de debate serán realizados por los estudiantes para la aplicación de análisis y toma de decisiones éticas en el ambiente de las organizaciones. Los estudiantes tendrán acceso a los diferentes casos reales en los enlaces electrónicos que se encuentran en el módulo, de manera que, podrán estudiarlos y seguir las instrucciones para llevar a cabo el debate de una forma ordenada y que cumpla con los objetivos. Este módulo se dirige a ofrecer una calidad memorable en la enseñanza de los estudiantes.

#### **II. Objetivos**

- Ofrecer a los estudiantes la oportunidad de practicar la integración de las consideraciones éticas aprendidas en otro módulo previamente estudiado: “Three Framework for Ethical Decision”.
- Lograr que los estudiantes desarrollen destrezas en resolución de problemas éticos, comunicación y trabajo en equipo.
- Exponer a los estudiantes en un ambiente público (debates, presentación oral) donde desarrollen sensibilidad moral ante los

- distintos ambientes organizacionales.
- Provocar la creatividad de los estudiantes por medio del análisis y las presentaciones orales.
  - Lograr que los estudiantes vean cuan trabajoso es defender posiciones éticas.
  - Lograr que los estudiantes obtengan conocimientos por medio del aprendizaje colaborativo.

### **III. Estrategias Sugeridas Para cumplir con los objetivos (Se espera que estas estrategias de aprendizaje aporten al desarrollo global del estudiante.)**

- Se le asigna el módulo a los estudiantes al principio de semestre o trimestre escolar, de manera que, puedan desarrollar los preparativos correspondientes en el transcurso: aprender destrezas necesarias para realizar las actividades, estudiar los casos, aprender a analizar los casos de una forma ética, organizarse como grupo, familiarizarse con las instrucciones que se ofrecen, etc.
- Los estudiantes se dividen en dos grupos: A y B. Cada grupo se divide en dos equipos: (A) 1 y 2, (B) 1 y 2.
- Un equipo realizará su presentación y defenderá su posición ante preguntas y cuestionamientos de parte del otro equipo, del instructor y de los demás estudiantes. (a) Un equipo presenta su análisis del caso en un espacio de 7 minutos; (b) el otro equipo comenta acerca de esa presentación (se requiere más destrezas de escuchar activamente que destrezas de refutación); (c) el equipo que presenta, concluye, respondiendo al comentario (requiere clarificaciones adicionales de su posición); (d) finalmente, el equipo que presenta contesta preguntas que realizan el instructor y los demás estudiantes.
- Se debe prevenir que los estudiantes compitan sin una debida preparación.
- Se debe motivar a los estudiantes a que utilicen las herramientas de análisis para tomar decisiones éticas que tienen a su disposición.

### **IV. Roles de los actores en la actividad del Tazón de la Ética en Ambientes de la Organización**

#### **Instructor**

- Establece las reglas de la competencia (Se incluyen en el módulo de estudiantes): Límites de tiempo en la presentación, orientación a los competidores, criterios de evaluación.
- El instructor es el anfitrión de la competencia; asume una posición seria y de liderazgo; su vestimenta se relaciona con su rol de anfitrión.
- Sigue al pie de la letra las reglas de la competencia.
- Administra el tiempo para cumplir con normas establecidas.
- Estructura un diálogo, de la forma preguntas/ respuestas, con los equipos que presentan y con los demás estudiantes.
- Ofrece retroalimentación al equipo que estuvo a cargo de la presentación al final de la clase.
- Ofrece comentarios y sugerencias a los equipos que así lo ameriten.

**Estudiantes (Recordemos que en esta dinámica el trabajo colaborativo entre los estudiantes es esencial para maximizar su propia enseñanza)**

- Asumirán una participación activa en el proceso de los debates.
- Serán los jueces de las controversias donde se confronten los valores éticos.
- Ofrecerán estrategias que permitan remediar alguna situación ética.
- Escucharán con atención las ponencias y estarán preparados para argumentar utilizando sus conocimientos adquiridos.
- Evaluarán a sus pares por medio de unas formas que le administra su instructor/a y, además, podrán autoevaluarse. (Esto para que el instructor pueda llevar el progreso del estudiante de forma ágil y organizada)

## **EAC Toolkit Project**

This module is a WORK-IN-PROGRESS; the author(s) may update the content as needed. Others are welcome to use this module or create a new derived module. You can COLLABORATE to improve this module by providing suggestions and/or feedback on your experiences with this module.

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